

1. A valve assembly comprising:
  - a plug having a valve seat at a distal portion of the plug, said plug having an outer perimeter defining a first cross sectional area;
  - a holder cantileveredly connected to the plug;
  - an actuator operably connected to the holder;
  - a poppet connected to the actuator, said poppet driven by the actuator intermediate an open configuration wherein a fluid passes intermediate the valve seat and the poppet and a closed configuration wherein the poppet forms a seal relative to the valve seat;
  - wherein the holder, actuator and poppet are positioned within a second cross sectional area parallel to the first cross sectional area when in at least one of the open and closed configurations, said second cross sectional area bounded by a parallel cross section of the first cross sectional area.
2. The valve assembly of claim 1 wherein the actuator has at least one shape memory alloy member.
3. The valve assembly of claim 2 wherein the at least one shape memory allow member is further comprised of a plurality of linearly moveable shape memory alloy members operably connected together for parallel movement wherein a total movement of the actuator is greater than a movement of any individual linearly moveable shape memory alloy member.
4. The valve assembly of claim 1 wherein the actuator places the valve assembly in an open configuration upon receipt of an electrical signal.

5. The valve assembly of claim 4 further comprising a biasing member and wherein upon a discontinuance of the electrical signal, the biasing member at least assists in placing the valve assembly in a closed configuration.
6. The valve assembly of claim 1 wherein the end plug further comprises a boss extending from a face of the end plug, said boss having the valve seat thereon.
7. The valve assembly of claim 6 wherein the holder further comprises a base which contacts the face of the end plug.
8. The valve assembly of claim 6 wherein the boss further comprises a body, a neck and a head, the head having the valve seat, and the neck having a smaller perimeter than an outer perimeter of the head and the body thereby defining a channel intermediate the body and the head.
9. The valve assembly of claim 8 wherein the holder has a flange which is received within the channel in the boss.
10. The valve assembly of claim 6 wherein the face has a cross sectional area larger than the cross sectional area of the holder, the actuator and the poppet in both the open and closed configurations.

11. The valve assembly of claim 1 wherein the valve seat is located along an axis of the end plug and the poppet is linearly driven along the axis.

12. The valve assembly of claim 1 further comprising a housing extending about the holder, poppet and actuator.

13. The valve assembly of claim 12 further comprising an electrical connection exterior to the housing electrically communicating with the actuator.

14. The valve assembly of claim 13 wherein the electrical connection receives an electrical input from an ignitor, and the valve assembly provides a gas supply through the valve seat to a burner when the valve assembly is in the open configuration.

15. The valve assembly of claim 14 wherein the valve assembly is normally in the closed configuration and is placed in the open configuration upon receipt of the electrical input exceeding 2.4 Amps.

16. The valve assembly of claim 15 wherein the valve assembly is placed in the open configuration when the electrical input is intermediate a range of about 2.5 Amps to about 3.1 Amps.

17. The valve assembly of claim 15 wherein the valve assembly is biased toward the closed configuration and upon one of a loss of the electrical input and the electrical input failing to exceed a predetermined minimum, the valve is returned to the closed configuration.

18. The valve assembly of claim 12 wherein the housing defines a tube and said plug being a first end plug connected at a proximal end of the tube.

19. The valve assembly of claim 18 further comprising a second end plug connected to a distal end of the tube.

20. The valve assembly of claim 19 wherein the second end plug further comprises a passage in communication with a proximal end of the second end plug, an outlet normally in communication with the passage, a post extending through a portion of the end plug, a seal located at a proximal end of the post, said seal operable intermediate an open and a closed configuration, said seal normally in the open configuration wherein the passage and outlet are in fluid communication, and upon movement of the post, said seal obstructing communication from the passage to the outlet thereby placing the second end plug in a closed configuration.

21. The valve assembly of claim 1 further comprising a connector connecting the actuator to the poppet, said connector having a hook with opposing barbs, and said poppet having a cavity with opposing slots in a resilient sleeve, said barbs retained in the slots.

22. The valve assembly of claim 1 wherein the holder further comprises a shoulder and a biasing member is locating intermediate the shoulder and a portion of the poppet, said biasing member normally locating the poppet against the valve seat to place the valve assembly in the closed configuration.

23. The valve assembly of claim 21 wherein the holder further comprises a clip which at least assists in fixedly retaining at least a portion of the actuator relative to the holder, said clip located opposite the shoulder from the valve seat.

24. A valve assembly comprising:

    a linearly operable actuator connected to a poppet at a connection,  
    said connection having a hook with opposing barbs;  
    said poppet having a resilient sleeve having a cavity therein and opposing slots;  
    said hook retained in the cavity with the barbs extending into the slots; and  
    a valve seat linearly disposed along an axis with the poppet, said poppet operable intermediate an open and a closed configuration.

21. The valve assembly of claim 20 wherein the valve seat is disposed on a distal portion of an end plug.

22. The valve assembly of claim 21 further comprising a holder cantileveredly connected to the end plug, said holder connected to the actuator at a clip.

23. A valve assembly comprising:

an actuator;

a holder connected to a portion of the actuator;

a poppet connected to the actuator;

a valve seat disposed along an axis with the poppet, said poppet linearly operable intermediate an open and a closed configuration with respect to the valve seat, and said holder fixedly mounted relative to the valve seat; and

wherein the actuator moves the poppet from a first position linearly to a second position, wherein when in the first position, said valve assembly is in the closed configuration, and when in the second position, said valve assembly is in the open configuration.

24. The valve assembly of claim 23 wherein the actuator is releasably connected to the holder at a clip.

25. The valve assembly of claim 24 wherein the holder further comprises a shoulder and further comprising a biasing member intermediate a portion of the poppet and the shoulder.

26. The valve assembly of claim 25 wherein the shoulder is intermediate the clip and the biasing member.

27. A valve assembly comprising:

a housing with a proximal and distal end;

a first end plug at the proximal end of the housing, said first end plug having an inlet;  
a second end plug at the distal end of the housing having a manual shut off valve  
comprising  
a passage in communication with a proximal end of the second end plug,  
an outlet normally in communication with the passage,  
a post extending through a portion of the end plug,  
a seal located at a proximal end of the post, said seal operable intermediate  
an open and a closed configuration, said seal normally in the open configuration wherein  
the passage and outlet are in fluid communication, and upon movement of the post, said seal  
obstructing communication from the passage to the outlet thereby placing the manual shut off  
valve in a closed configuration.

28. The valve assembly of claim 27 wherein the first end plug has a first outer perimeter and  
the second end plug has an outer perimeter and the first and second outer perimeters are parallel  
to one another.

29. The valve assembly of claim 28 wherein the first and second outer perimeters are equal in  
length.

30. The valve assembly of claim 29 wherein the first end plug further comprises a valve seat,  
and the valve assembly further comprises an electrically operated actuator connected to a poppet.